

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number
WO 2004/066673 A1

(51) International Patent Classification⁷: **H04S 7/00**

(21) International Application Number:
PCT/GB2004/000160

(22) International Filing Date: 19 January 2004 (19.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0301093.1 17 January 2003 (17.01.2003) GB

(71) Applicant (for all designated States except US): **LIMITED** [GB/GB]; St. John's Innovation Centre, Cowley Road, Cambridge CB4 0WS (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **HOOLEY, Anthony** [GB/GB]; 79 De Freville Avenue, Cambridge CB4 1HP (GB). **TROUGHTON, Paul, Thomas** [GB/GB]; 71

Gwydir Street, Cambridge CB1 2LG (GB). **RICHARDS, David, Charles, William** [GB/GB]; 61 Coles Road, Milton, Cambs CB4 6BL (GB). **TURNER, David, Christopher** [GB/GB]; Nethercote, Stamford Road, Alderley Edge SK9 7NS (GB).

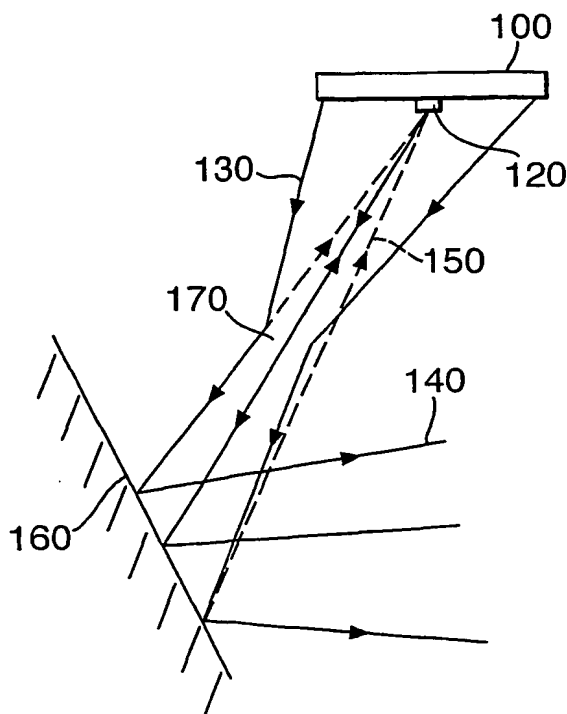
(74) Agents: **ROBERTS, Mark, Peter** et al.; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5JJ (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: SET-UP METHOD FOR ARRAY-TYPE SOUND SYSTEM



(57) Abstract: There is disclosed a method for setting up a Sound Projector such that it is suitable for a variety of functions, including surround sound. The method allows a semi-automatic or automatic set-up to be accomplished whereby the Sound Projector emits test signals and these are received by one or more microphones in order to detect the position and angles of the major reflecting surfaces in the room. In a preferred embodiment, the room is scanned by a moving directional sound beam and the first reflection of said sound beam is detected at a microphone in order to determine the distance of the reflective surfaces from the Sound Projector for all or most possible angles of sound beams.

BEST AVAILABLE COPY

WO 2004/066673 A1



GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.